School Specialty Math *Think Math*, Grades 3-5

Degree of Evidence regarding the Standards for Mathematical Practice:

Grade 3 – Moderate Evidence Grades 4 and 5 – Minimal Evidence Overall – Limited Evidence

Summary of evidence:

- 1. Make sense of problems and persevere in solving them. There is moderate evidence of this practice throughout the Grade 3 materials, but minimal evidence was cited in the Grades 4 and 5 materials. This practice is well developed and integrated in Grade 3 but not fully developed in Grades 4 and 5. The use of multiple examples of open-ended questions being used to encourage student discourse, and evidence of multiple approaches and multiple representations is well developed in the Grade 3 materials. In the Grades 4 and 5 materials, some open-ended questions were cited, but the problem-solving approach is formulated and students are not challenged to plan or justify their problem-solving approach. The use of multiple models and approaches was found to be very limited in the Grades 4 and 5 lessons.
- 2. **Reason abstractly and quantitatively**. There is inconsistent evidence to support this practice throughout this grade span. There is limited evidence of this practice being developed in Grade 3, but the evidence is minimal in the Grades 4 and 5 materials. Evidence of representing scenarios symbolically and applying understanding, not just using algorithms, was found repeatedly in the Grade 3 materials. Students in Grades 4 and 5 use only the standard algorithm and are not asked to reason abstractly or symbolically. Very little evidence was found to suggest students consider reasonableness.
- 3. Construct viable arguments and critique the reasoning of others. There was moderate evidence found of this practice in the Grade 3 materials, but minimal evidence was found in the Grades 4 and 5 samples. Reviewers for Grade 3 cited evidence of student discourse involving justifying conclusions and explaining problem-solving methods. Grades 4 and 5 materials suggest some problem solving using different assumptions, but there is a lack of evidence of student arguing, justifying, or critiquing others.
- 4. **Model with mathematics.** There was limited evidence found for this practice, and it is underdeveloped throughout this series. Some evidence was cited in the Grade 3 materials for using and creating mathematical models/tools, but in the Grades 4 and 5 materials evidence of students creating and revising mathematical tools was not found. Minimal evidence of answering problems in context was found across the grade span, but overall this practice is underdeveloped.
- 5. Use appropriate tools strategically. There is minimal evidence for support of this practice, and it is a particular weakness of this series. Reviewers cited a few examples of students selecting tools to solve problems in the Grade 3, but no examples were cited in the Grades 4 and 5 materials. There is no evidence of student opportunities to use tools appropriately and strategically or to evaluate tools for strengths or limitations within this resource.
- 6. **Attend to precision.** There was moderate evidence found to support development of this practice in the Grades 3 and 4 samples, but little to no evidence was cited in the Grade 5 materials. Evidence of multiple opportunities for communication and examples that model precision were found in the Grades 3 and 4 materials, but in Grade 5, the evidence is lacking.
- 7. **Look for and make use of structure**. There was minimal evidence of this practice found in the Grades 4 and 5 samples. The practice is more developed in Grade 3, with evidence of prior

- learning applied to new learning and some examples of making generalizations from observed patterns.
- 8. Look for and express regularity in repeated reasoning. There is minimal evidence of this practice in the sampled sections of this series. The teacher notes encourage instructors to ask questions (e.g., "What do you notice? What do you see? Can you describe the pattern?), but generally this practice is underdeveloped throughout this series.